

REMARKS

Claims 1-7, 14, and 17-20 are pending in the application. Applicant, by this paper, amends claims 1 and 14 and adds new claims 17-20. Applicant respectfully requests reconsideration and allowance of all pending claims.

Discussion of Rejections Under 35 U.S.C. §103

Claims 1-2, 7, and 14 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Zhou et al., "Bypassing Vocoders in CDMA Mobile-to-Mobile Calls," 04-1998, IEEE, 0-7803-4320-4, pp. 2527-2531, (hereinafter Zhou) in view of U.S. Patent No. 6,125,120 to Lehtimaki. Claims 3-6 were rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Zhou in view of Lehtimaki, and further in view of U.S. Patent No. 6,172,974 to Tseng et al. (hereinafter Tseng).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference, or references when combined, must teach or suggest all of the claim limitations.

Claim 1 recites a method for "transmitting wideband speech signals over a narrowband communication system." The method includes "puncturing the narrowband digital signal with the plurality of data packets carrying the wideband speech signal." This feature is neither taught nor suggested by the cited references Zhou, Lehtimaki and Tseng.

As claimed and described in Applicant's specification, the encoded data packets carrying the wideband speech signal are punctured onto the narrowband digital signal, which is itself generated from the wideband speech signal. Thus, the narrowband digital signal carries a narrowband version of the wideband speech signal and also carries, in the form of punctured data, the data packets.

Zhou discloses "wide-band CDMA," which the Office Action contends is similar to "wideband speech signals" in Claim 1. "Wide-band CDMA" does not represent a "wideband speech signal," but instead, represents a wideband physical layer air interface that is used to transmit narrowband speech signals. "Wide-band CDMA" signals in Zhou are not punctured in a narrowband digital signal. Furthermore, there is no reason to even attempt to transmit "wide-

band CDMA” signals across a narrowband communication system, as suggested by the Office Action, because “wide-band CDMA” signals are physical layer air interface signals and are only needed for the air interface between a base station and a mobile unit.

The Office Action acknowledges that Zhou fails to disclose (a) “puncturing the narrowband digital signal at the first base station” and (b) “separating the narrowband digital signal at the second base station,” as recited in Claim 1. *Office Action*, dated July 7, 2005, at page 7. The Office Action contends that “puncturing” of Claim 1 is taught in Lehtimaki. However, the Office Action does not say that Lehtimaki teaches “separating the narrowband digital signal from the plurality of data packets at the second base station,” as recited in Claim 1. For this reason, Claim 1 should be allowable.

Lehtimaki discloses “a PCM coded speech signal in which one or more least significant bits of the PCM samples provide a sub-channel for lower-rate vocoded speech containing the same speech information as the PCM samples but in a vo-coded format.” *Lehtimaki*, Abstract (emphasis added). Thus, Lehtimaki does not describe a narrowband digital signal punctured by a “plurality of data packets carrying the wideband speech signal” from which the narrowband digital signal is generated, as recited in Claim 1. A narrowband version of a wideband speech signal contains less speech information than the original wideband speech signal, as described in Applicants’ specification pp. 2, 8-9 and shown in Figs. 2A-3. Instead, Lehtimaki describes a “sub-channel” carrying a vocoded version of the “same speech information.”

Lehtimaki also does not describe “wideband speech signals” and does not describe “generating a narrowband digital signal” from “data packets carrying the wideband speech signals,” as recited in Claim 1.

Additionally, there is no motivation to combine the teachings of Zhou with Lehtimaki in a manner that would result in Applicant’s claimed invention. The Office Action contends that the “wide-band CDMA” signal in Zhou represents Applicant’s “wideband speech signals” in Claim 1. *Office Action*, at page 7, line 2. However, as discussed above, the “wide-band CDMA” signals in Zhou are air interface signals and not wideband speech signals. Lehtimaki describes a subchannel for communicating a vocoded speech signal. *Lehtimaki*, Abstract. There is no discussion in the references of “wideband speech signals,” as recited in Claim 1.

Even if “wide-band CDMA” signals in Zhou are to be considered similar to “wideband speech signals,” there is no suggestion or motivation to attempt to vocode a “wide-band CDMA”

signal and insert it as a “subchannel” in a baseband “PCM coded” signal in Lehtimaki. There is no expectation of success in attempting to insert a “wide-band CDMA” signal as a subchannel in a baseband “PCM coded” signal. Thus, there is no motivation to combine the teachings of Zhou with Lehtimaki, and there is no expectation of success in the combination proposed by the Office Action.

Thus, neither Zhou nor Lehtimaki teaches nor suggests Claim 1. Applicant respectfully requests reconsideration and allowance of Claim 1.

Claim 14 includes features similar to those discussed above in relation to claim 1, and thus is believed to be allowable at least for the reasons presented above in relation to claim 1.

Claims 2-7 depend from claim 1 and are believed to be allowable at least for the reason that they depend from an allowable base claim. Applicant respectfully requests reconsideration and allowance of claims 2-7 and 14.

Discussion of New Claims

New claims 17-20 are added by this paper. Support for claims 17-20 can be found throughout the original application. No new matter is added by the amendment.

In particular, support for claim 17 can be found, for example, at page 12, ll. 30-33.

Support for claim 18 can be found, for example, at page 9, ll. 1-3.

Support for claim 19 can be found, for example, at page 8, ll. 28-31.

Support for claim 20 can be found, for example, at page 13, ll. 1-3.

Applicant respectfully requests allowance of the new claims.

CONCLUSION

In light of the arguments presented above, the Applicants respectfully submit that the instant claims are patentable. Accordingly, reconsideration and allowance of this Application is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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